

What is claimed is:

1. A Fresnel lens sheet comprising a Fresnel lens substrate and a Fresnel lens, whose surface of the light source side has an average pitch of $200\text{ }\mu\text{ m}$ or smaller and ten point roughness of 3 to $15\text{ }\mu\text{ m}$.

2. The Fresnel lens sheet according to Claim 1, wherein said Fresnel lens substrate comprises a thermoplastic resin in an amount of 100 parts by weight and light diffusible fine particles with the average particle diameter of 13 to $30\text{ }\mu\text{ m}$ and with an index of refraction satisfying the following equation (1):

$$0 \leq |N_p - N_s| < 0.02 \quad (1)$$

wherein N_p represents an index of refraction of the thermoplastic resin, and N_s represents an index of refraction of light diffusible fine particles.

3. The Fresnel lens sheet according to Claim 1, wherein said Fresnel lens substrate comprises a thermoplastic resin obtained by molding with the use of a metallic roller having a surface with ten point roughness of 6 to $15\text{ }\mu\text{ m}$.

4. The Fresnel lens sheet according to Claim 2, wherein said Fresnel lens substrate comprises a thermoplastic resin obtained by molding with the use of a metallic roller having a surface with ten point roughness of 6 to $15\text{ }\mu\text{ m}$.

5. The Fresnel lens sheet according to Claim 1, wherein said

Fresnel lens substrate comprises a copolymer resin of methyl methacrylate and styrene.

6. The Fresnel lens sheet according to Claim 2, wherein said Fresnel lens substrate comprises a copolymer resin of methyl methacrylate and styrene.

7. The Fresnel lens sheet according to Claim 3, wherein said Fresnel lens substrate comprises a copolymer resin of methyl methacrylate and styrene.

8. The Fresnel lens sheet according to Claim 4, wherein said Fresnel lens substrate comprises a copolymer resin of methyl methacrylate and styrene.

9. A rear projection screen obtained by assembling the Fresnel lens sheet according to Claim 1 and a lenticular lens sheet.

10. The rear projection screen according to Claim 9, wherein said Fresnel lens substrate comprises a thermoplastic resin in an amount of 100 parts by weight and light diffusible fine particles with the average particle diameter of 13 to 30 μ m and with an index of refraction satisfying the following equation (1):

$$0 \leq | N_p - N_s | < 0.02 \quad (1)$$

wherein N_p represents an index of refraction of the thermoplastic resin, and N_s represents an index of refraction of light diffusible

fine particles.

11. The rear projection screen according to Claim 9, wherein said Fresnel lens substrate comprises a thermoplastic resin obtained by molding with the use of a metallic roller having a surface with ten point roughness of 6 to 15 μ m.

12. The rear projection screen according to Claim 10, wherein said Fresnel lens substrate comprises a thermoplastic resin obtained by molding with the use of a metallic roller having a surface with ten point roughness of 6 to 15 μ m.

13. The rear projection screen according to Claim 9, wherein said Fresnel lens substrate comprises a copolymer resin of methyl methacrylate and styrene.

14. The rear projection screen according to Claim 10, wherein said Fresnel lens substrate comprises a copolymer resin of methyl methacrylate and styrene.

15. The rear projection screen according to Claim 11, wherein said Fresnel lens substrate comprises a copolymer resin of methyl methacrylate and styrene.

16. The rear projection screen according to Claim 12, wherein said Fresnel lens substrate comprises a copolymer resin of methyl

methacrylate and styrene.

17. A process for producing a Fresnel lens sheet comprising a step of molding a Fresnel lens substrate comprising a thermoplastic resin in an amount of 100 parts by weight and light diffusible fine particles with the average particle diameter of 13 to 30 μm and with an index of refraction satisfying the following equation (1):

$$0 \leq |N_p - N_s| < 0.02 \quad (1)$$

wherein N_p represents an index of refraction of the thermoplastic resin, and N_s represents an index of refraction of light diffusible fine particles; with the use of a metallic roller having a surface with ten point roughness of 6 to 15 μm .

18. A process for producing a rear projection screen comprising a step of forming a Fresnel lens sheet by molding a Fresnel lens substrate comprising a thermoplastic resin in an amount of 100 parts by weight and light diffusible fine particles with the average particle diameter of 13 to 30 μm and with an index of refraction satisfying the following equation (1):

$$0 \leq |N_p - N_s| < 0.02 \quad (1)$$

wherein N_p represents an index of refraction of the thermoplastic resin, and N_s represents an index of refraction of light diffusible fine particles, with the use of a metallic roller having a surface with ten point roughness of 6 to 15 μm and a step of assembling a lenticular lens sheet.